

# 12 Lecture - CS302

## Important Mcqs

1. **Which of the following is a primary application of a comparator?**
- a. Digital signal processing
  - b. Analog signal processing
  - c. Audio signal amplification
  - d. None of the above

Answer: a

2. **Which of the following is not a type of comparator?**
- a. Voltage comparator
  - b. Current comparator
  - c. Phase comparator
  - d. Time comparator

Answer: c

3. **Which of the following is true about an ideal comparator?**
- a. It has infinite gain
  - b. It has zero offset voltage
  - c. It has infinite bandwidth
  - d. All of the above

Answer: d

4. **Which of the following is a common type of output for a comparator?**
- a. Pulse width modulated signal
  - b. Analog signal
  - c. Digital signal
  - d. Sine wave

Answer: c

5. **Which of the following is not a factor to consider when selecting a comparator?**
- a. Power consumption
  - b. Supply voltage
  - c. Input offset voltage
  - d. Operating temperature

Answer: d

6. **What is the function of a hysteresis circuit in a comparator?**
- a. To reduce noise
  - b. To provide a fixed reference voltage

- c. To increase the gain
- d. To amplify the output signal

**Answer: a**

7. **Which of the following is not a common comparator input configuration?**
- a. Inverting
  - b. Non-inverting
  - c. Differential
  - d. Single-ended

**Answer: d**

8. **What is the output state of a comparator if the input voltages are equal?**
- a. High
  - b. Low
  - c. Depends on the type of comparator
  - d. Indeterminate

**Answer: d**

9. **Which of the following is not a type of comparator output stage?**
- a. Open-drain
  - b. Push-pull
  - c. Source-follower
  - d. None of the above

**Answer: d**

10. **Which of the following is a benefit of using a comparator in a control system?**
- a. High precision and accuracy
  - b. Low power consumption
  - c. High gain
  - d. All of the above

**Answer: a**